

## **REMARKS**

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-29 are presently active in this case.

### **DRAWING OBJECTION**

The Examiner has objected to the drawings, specifically Fig. 2, as showing phase shifters in the drawing, even though in the specification Fig. 2 is described as an embodiment with no phase shifters. Applicants respectfully traverse.

Applicants assert that Fig. 2 discloses a second embodiment of the present invention not **requiring** any phase shifters, **not** that the second embodiment contains no phase shifters (see page 8, lines 17-18 and page 9, lines 9-16 of the specification). Thus, Applicants respectfully request withdrawal of this objection.

### **CLAIM OBJECTIONS**

The Examiner has objected to the numbering of claims as not being in accordance with 37 C.F.R. §1.26; more specifically, that there is no claim 28. Applicants acknowledge the Examiner's objection and have renumbered the claims 1-29. Withdrawal of this objection is respectfully requested.

**35 U.S.C. §102 REJECTIONS**

The Examiner has rejected claims 1-6, 18-22, 24, 25 and 30 as being anticipated by Hemmi (U.S. Patent No. 6,275,184). Applicants respectfully traverse this rejection.

With respect to claims 1 and 18, the Examiner contends that Hemmi teaches the claimed invention in column 5, lines 15-20, 31-33, 33-38, 40-43, 57-59.

However, Applicants submit that none of claims 1 or 18 are anticipated by Hemmi.

Hemmi is directed to a system for steering an antenna including a first component for a first focusing of a plurality of signals to form a plurality of focused signals in a vertical direction, and further includes a second component for performing a second focusing of the plurality of focused signals in a horizontal direction (col. 5:3-6). More specifically, Hemmi includes a set of array elements (46) including a low noise amplifier (62), a planar lens (64), and a steering system (66). Hemmi further teaches the planar lens being a strip line Rotman lens. Referring to Fig. 3, Hemmi discloses radiating elements (42) to receive component beam signals, the signals are then passed on through the lens (64) to combine component beams in order to focus them in the first vertical direction. The array elements (60) then pass the focused beams to the second array of elements (90) including a second strip line Rotman lens and a second steering system to focus beams in a second horizontal direction.

However, with respect to claim 1, Hemmi does not teach or fairly suggest a “first antenna array including a first path and a second path wherein said first carrier wave signal is distributed into a first distributed signal sent by said first path of said first antenna array and a second distributed signal sent by said second path of said first antenna array,” and “a second antenna array sending a second carrier wave signal, said second antenna array including a first path and a second path wherein said second carrier wave signal is distributed into a first distributed signal sent by said first path of said second antenna array and a second distributed signal sent by said second path of said second antenna array.” Instead, Hemmi discloses already distributed (component) beams which are combined and focused in a first direction, and subsequently fed to a second set of array elements which focuses and shapes the beams in a second direction.

With respect to claim 18, Hemmi is silent with respect to “a combined energy of said first and second distributed signals of said first carrier wave signal is a maximum at a first beam port,” and fails to teach or fairly suggest a “reverse-fed Rotman lens.” Instead, Hemmi discloses using a Strip-line Rotman lens (col. 5 : 22-26).

Therefore, in view of the above arguments, Applicants respectfully submit that the rejection with respect to claims 1 and 18, and all claims that depend therefrom be withdrawn.

**35 U.S.C. §103 REJECTIONS**

The Examiner has rejected claims 7 and 10-15 as being anticipated by Hemmi in view of Muhlhauser (U.S. Patent No. 6,181,293); claims 8, 23 and 26 as being anticipated by Hemmi in view of Goldsmith (U.S. Patent No. 5,619,061); claims 9 and 29 as being anticipated by Hemmi in view of Gespert (U.S. Publication No. 2002/0056066); and claim 16 as being anticipated by Hemmi in view of Muhlhauser and further in view of Goldsmith. Applicants respectfully traverse.

With respect to the rejections of claims 7-16, 23, 26 and 29, Applicants assert that even by a cursory review of the aforementioned documents, none of Muhlhauser, Goldsmith, or Gespert makeup for at least the deficiencies in Hemmi as discussed with respect to claim 1 and 18. Thus, Applicants respectfully submit that the above rejection be withdrawn, and further assert that these claims as pending are allowable for at least the reasons stated above with respect to independent claims 1 and 18.

Furthermore, with respect to claim 10, Applicants submit that the outstanding Office Action fails to establish a *prima facie* case of obviousness under 35 U.S.C. §103.

In order to establish a *prima facie* case of obviousness under 35 U.S.C. §103, the Examiner has the burden of meeting **all** the following three basic criteria:

1. The prior art must teach or suggest all of the claim limitations;
2. There must be a reasonable expectation of success; and
3. There must be some suggestion or motivation either in the art or knowledge generally available to one of ordinary skill in the

art to modify the reference or to combine the teachings (M.P.E.P. §2143).

With respect to claim 10, the Examiner has failed to meet at least one of the basic criteria by omitting some suggestion or motivation, either in the art or knowledge generally available to one of ordinary skill in the art to modify to the reference or to combine teachings. On page 12, paragraph 2 of the Office Action, the Examiner has cited motivation as "in order to split up the multiple signals for processing and transmitting." Applicants submit that a *prima facie* case of obviousness has not been established due to the lack of citation as to where in Hemmi, or any secondary document for that matter, the suggestion or motivation to combine is expressly stated or suggested. Further, the "motivation" used by the Examiner, "in order to split up the multiple signals for processing and transmitting" provides no evidence of an advantage, or expected beneficial result that would have been produced by the combination of these references - hence no motivation. One of ordinary skill in the art would not "split up the multiple signals for processing and transmitting" unless some beneficial result would be achieved by doing so. In particular, the Examiner has not pointed to any portions of Hemmi which would direct one of ordinary skill in the art to combine the Hemmi teachings with the teachings of Mulhauser. Similarly, the Examiner has failed to identify any teaching in Mulhauser which would direct one of ordinary skill in the art to combine the alleged teachings of Hemmi.

In view of this and at least the reasons stated above with respect to claims 1 and 18, Applicants assert that claims 7-16, 23, 26 and 29 are

allowable over the cited prior art. Thus, Applicants respectfully request that the above rejections be withdrawn.

## **CONCLUSION**

In view of above remarks, reconsideration of the outstanding rejection and allowance of the pending claims is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Andrew M. Waxman, Reg. No. 56,007, at the telephone number of the undersigned listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Very truly yours,

HARNESS, DICKEY & PIERCE, PLC

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